# 9. Abbreviations and Letter Symbols

- **9.1.** Abbreviations and letter symbols are used to save space and to avoid distracting the reader by use of repetitious words or phrases.
- **9.2.** The nature of the publication governs the extent to which abbreviations are used. In the text of technical and legal publications, and in parentheses, brackets, footnotes, sidenotes, tables, leaderwork, and bibliographies, many words are frequently abbreviated. Heads, legends, tables of contents, and indexes follow the style of the text.
- **9.3.** Internal and terminal punctuation in symbols representing units of measure are to be omitted to conform with practice adopted by scientific, technical, and industrial groups. Where the omission of terminal punctuation causes confusion; e.g., the symbol *in* (inch) mistaken for the preposition *in*, the symbol should be spelled out.
- **9.4.** Standard and easily understood forms are preferable, and they should be uniform throughout a job. Abbreviations not generally known should be followed in the text by the spelled-out forms in parentheses the first time they occur; in tables and leaderwork such explanatory matter should be supplied in a footnote. As the printer cannot rewrite the copy, the author should supply these explanatory forms.
- **9.5.** In technical matter, symbols for units of measure should be used only with figures; similarly, many other abbreviations and symbols should not appear in isolation. For example, *energy is measured in foot-pounds*, NOT *energy is measured in ft•lbs*. See ASME Y14.38 ("Abbreviations and Acronyms for use on Drawings and Related Documents") for an extended list of technical abbreviations.

# Capitals, hyphens, periods (points), and spacing

**9.6.** In general, an abbreviation follows the capitalization and hyphenation of the word or words abbreviated. It is followed by a period unless otherwise indicated.

c.o.d. St. but ft•lb

**9.7.** Abbreviations and initials of a personal name with points are set without spaces. Abbreviations composed of contractions and initials or numbers, will retain space.

F.D.R. i.e., e.g. (but op. cit.) I.F.K. B.S., LL.D., Ph.D., B.Sc. L.B.J. H.R. 116 (but S. 116, S. Con. B.C. Forrest, D.D.S. Res. 116) U.S. C.A.D.C. (but App. D.C.) U.N. but AT&T U.S.C. (but Rev. Stat.) Texas A&M A.F. of L.-CIO (AFL-CIO preferred) R&D A.D., B.C.

**9.8.** Except as otherwise designated, points and spaces are omitted after initials used as shortened names of governmental agencies and of other organized bodies. "Other organized bodies" will be interpreted to mean organized bodies that have become popularly identified with a symbol, such as MIT (Massachusetts Institute of Technology), GM (General Motors), AFLAC (American Family Life Assurance Company), etc. (See also rule 9.61.) Symbols, when they appear in copy, may be used for acts of Congress. Example: ARA (Area Redevelopment Act).

VFW TVA ARC NLRB AFL-CIO ASTM

# **Geographic terms**

**9.9.** *United States* must be spelled out when appearing in a sentence containing the name of another country. The abbreviation *U.S.* will be used when preceding the word *Government* or the name of a Government organization, except in formal writing (treaties, Executive orders, proclamations, etc.); congressional bills; legal citations and courtwork; and covers and title pages.

U.S. Government

U.S. Congress

U.S. Department of Health and Human Services

U.S. district court

U.S. Supreme Court (but Supreme Court of the United States)

U.S. Army (but Army of the United States)

U.S. monitor Nantucket

U.S.-NATO assistance

U.S. Government efforts to control inflation must be successful if the United States is to have a stable economy.

but British, French, and United States Governments; United States-British talks

**9.10.** With the exceptions in the preceding rule, the abbreviation *U.S.* is used in the adjective position, but is spelled out when used as a noun.

U.S. foreign policy
U.S. farm-support program
U.S. attorney
U.S. citizen
United States Steel Corp.
(legal title)
Foreign policy of the
United States
United States
United States

- **9.11.** The names of foreign countries are not abbreviated, with the exception of the former U.S.S.R., which is abbreviated due to its length.
- **9.12.** In other than formal usage as defined in rule 9.9, all States of the United States, Puerto Rico, the Virgin Islands, and freely associated states are abbreviated immediately following any capitalized geographic term, including armory, arsenal, airbase, airport, barracks, depot, fort, Indian agency, military camp, national cemetery (also forest, historic site, memorial, seashore, monument, park), naval shipyard, proving ground, reservation (forest, Indian, or military), and reserve or station (military or naval).

Prince George's County, MD Arlington National Cemetery, VA Mount Rainier National Forest, Aberdeen Proving Ground, MD WA Washington Dulles Stone Mountain, GA International Airport, VA National Naval Medical Center, Redstone Arsenal, AL Bethesda, MD Mark Twain National Wildlife but Refuge, IL-IA-MO (note use of Leavenworth freight yards, hyphens here) Kansas Altoona sidetrack, Wisconsin Richmond, VA

**9.13.** The Postal Service style of two-letter State, Province, and freely associated State abbreviations is to be used.

## United States

[Including freely associated States]

	. , , ,	
AlabamaAL	KentuckyKY	OhioOH
AlaskaAK	LouisianaLA	OklahomaOK
American Samoa AS	MaineME	OregonOR
ArizonaAZ	Marshall IslandsMH	PalauPW
ArkansasAR	MarylandMD	PennsylvaniaPA
CaliforniaCA	Massachusetts MA	Puerto RicoPR
ColoradoCO	MichiganMI	Rhode IslandRI
ConnecticutCT	MinnesotaMN	South CarolinaSC
DelawareDE	MississippiMS	South DakotaSD
District of ColumbiaDC	MissouriMO	TennesseeTN
Federated States of	MontanaMT	TexasTX
MicronesiaFM	NebraskaNE	UtahUT
FloridaFL	NevadaNV	VermontVT
GeorgiaGA	New HampshireNH	Virgin IslandsVI
GuamGU	New JerseyNJ	VirginiaVA
HawaiiHI	New MexicoNM	WashingtonWA
IdahoID	New YorkNY	West VirginiaWV
IllinoisIL	North CarolinaNC	WisconsinWI
IndianaIN	North DakotaND	WyomingWY
IowaIA	Northern Mariana	,
KansasKS	IslandsMP	
	Canada	
AlbertaAB	Northwest Territories NT	Prince Edward IslandPE
British ColumbiaBC	Nova ScotiaNS	QuebecQC
ManitobaMB	NunavutNU	SaskatchewanSK
New BrunswickNB	OntarioON	YukonYT
Newfoundland and Labrador NL		

- **9.14.** The names of other insular possessions, trust territories, and *Long Island*, *Staten Island*, etc., are not abbreviated.
- **9.15.** The names of Canadian Provinces and other foreign political subdivisions are not abbreviated except as noted in rule 9.13.

### **Addresses**

- **9.16.** Words such as *Street*, *Avenue*, *Place*, *Road*, *Square*, *Boulevard*, *Terrace*, *Drive*, *Court*, and *Building*, following a name or number, are abbreviated in footnotes, sidenotes, tables, leaderwork, and lists.
- **9.17.** In addresses, no period is used with the abbreviations *NW*, *SW*, *NE*, *SE* (indicating sectional divisions of cities) following name or number. *North*, *South*, *East*, and *West* are spelled out at all times.
- **9.18.** The word *Street* or *Avenue* as part of a name is not abbreviated even in parentheses, footnotes, sidenotes, tables, lists, or leaderwork.

14th Street Bridge

Ninth Avenue Bldg.

**9.19.** The words *County, Fort, Mount, Point*, and *Port* are not abbreviated. *Saint* (*St.*) and *Sainte* (*Ste.*) should be abbreviated.

## **Descriptions of tracts of land**

**9.20.** In the description of tracts of public land the following abbreviations are used (periods are only used after compass directional abbreviations that describe township(s) (T./Tps.) and range(s) (R./Rs.)):

```
SE¼NW¼ sec. 4, T. 12 S., R. 15 E., of the Boise Meridian lot 6, NE¼ sec. 4, T. 6 N., R. 1 W. N½ sec. 20, T. 7 N., R. 2 W., sixth principal meridian Tps. 9, 10, 11, and 12 S., Rs. 12 and 13 W. T. 2 S., Rs. 8, 9, and 10 E., sec. 26 T. 3 S., R. 1 E., sec. 34, W½E½, W½, and W½SE¼SE¼ sec. 32 (with or without a township number)
```

**9.21.** If fractions are spelled out in land descriptions, *half* and *quarter* are used (not *one-half* or *one-quarter*).

south half of T. 47 N., R. 64 E.

**9.22.** In case of an unavoidable break in a land-description symbol group at end of a line, use no hyphen and break after fraction.

#### Names and titles

**9.23.** The following forms are not always abbreviations, and copy should be followed as to periods:

Al	Ben	Fred	Walt
Alex	Ed	Sam	Will

**9.24.** In signatures, an effort should be made to retain the exact form used by the signer.

George Wythe Geo. Taylor

**9.25.** In company and other formal names, if it is not necessary to preserve the full legal title, such forms as *Bro.*, *Bros.*, *Co.*, *Corp.*, *Inc.*, *Ltd.*, and & are used. *Association* and *Manufacturing* are not abbreviated.

Radio Corp. of America Aluminum Co. of America Standard Oil Co. of New Jersey

H.J. Baker & Bro.
Jones Bros. & Co.
American Telephone &
Telegraph Co.

Norton Enterprises, Inc.

Maryland Steamship Co., Ltd. Chesapeake & Delaware Canal

Fairmount Building & Loan
Association

Electronics Manufacturing Co.
Texas College of Arts & Industries
Robert Wilson & Associates, Inc.
U.S. News & World Report
Baltimore & Ohio Railroad
Mine, Mill & Smelter Workers

but

Little Theater Company Senate Banking, Housing and Urban Affairs Committee

**9.26.** *Company* and *Corporation* are not abbreviated in names of Federal Government units.

Commodity Credit Corporation Federal Savings and Loan Insurance Corporation Pension Benefit Guaranty Corporation

- **9.27.** In parentheses, footnotes, sidenotes, tables, and leaderwork, abbreviate the words *railroad* and *railway* (*RR* and *Ry*.), except in such names as "Washington Railway & Electric Co." and "Florida Railroad & Navigation Corp." *SS* for *steamship*, *MS* for *motorship*, etc., preceding name are used at all times.
- **9.28.** In the names of informal companionships the word *and* is spelled out.

Lennon and McCartney

Currier and Ives

**9.29.** In other than formal usage, a civil, military, or naval title preceding a name is abbreviated if followed by first or given name or initial; but *Mr.*, *Mrs.*, *Miss*, *Ms.*, *M.*, *MM.*, *Messrs.*, *Mlle.*, *Mme.*, and *Dr.* are abbreviated with or without first or given name or initial.

# United States military titles and abbreviations

#### Officer rank

Officer ranks in the United States military consist of commissioned officers and warrant officers. The commissioned ranks are the highest in the military. These officers hold presidential commissions and are confirmed at their ranks by the Senate. Army, Air Force, and Marine Corps officers are called

company grade officers in the pay grades of O-1 to O-3, field grade officers in pay grades O-4 to O-6, and general officers in pay grades O-7 and higher. The equivalent officer groupings in the Navy are called junior grade, mid-grade, and flag.

Warrant officers hold warrants from their service secretary and are specialists and experts in certain military technologies or capabilities. The lowest ranking warrant officers serve under a warrant, but they receive commissions from the President upon promotion to chief warrant officer 2. These commissioned warrant officers are direct representatives of the President of the United States. They derive their authority from the same source as commissioned officers but remain specialists, in contrast to commissioned officers, who are generalists. There are no warrant officers in the Air Force.

	Army	Navy Coast Guard	Marines	Air Force
	General of the Army (Reserved for wartime only)	Fleet Admiral (Reserved for wartime only)		General of the Air Force (Reserved for wartime only)
O10	General GEN Army Chief of Staff	Admiral ADM Chief of Naval Operations and Commandant of the Coast Guard	General Gen. Commandant of the Marine Corps	General Gen. Air Force Chief of Staff
09	Lieutenant General LTG	Vice Admiral VADM	Lieutenant General Lt. Gen.	Lieutenant General Lt. Gen.
O8	Major General MG	Rear Admiral Upper Half RADM	Major General Maj. Gen.	Major General Maj. Gen.
07	Brigadier General BG	Rear Admiral Lower Half RDML	Brigadier General Brig. Gen.	Brigadier General Brig. Gen.
O6	Colonel COL	Captain CAPT	Colonel Col.	Colonel Col.
O5	Lieutenant Colonel LTC	Commander CDR	Lieutenant Colonel Lt. Col.	Lieutenant Colonel Lt. Col.
O4	Major MAJ	Lieutenant Commander LCDR	Major Maj.	Major Maj.
О3	Captain CPT	Lieutenant LT	Captain Capt.	Captain Capt.

	Army	Navy Coast Guard	Marines	Air Force
O2	First Lieutenant 1LT	Lieutenant Junior Grade LTJG	First Lieutenant 1st Lt.	First Lieutenant 1st Lt.
O1	Second Lieutenant 2LT	Ensign ENS	Second Lieutenant 2nd Lt.	Second Lieutenant 2nd Lt.
W5	Chief Warrant Officer CW5	Chief Warrant Officer CWO5	Chief Warrant Officer 5 CWO5	NO WARRANT
W4	Chief Warrant Officer 4 CW4	Chief Warrant Officer 4 CWO4	Chief Warrant Officer 4 CWO4	NO WARRANT
W3	Chief Warrant Officer 3 CW3	Chief Warrant Officer 3 CWO3	Chief Warrant Officer 3 CWO3	NO WARRANT
W2	Chief Warrant Officer 2 CW2	Chief Warrant Officer 2 CWO2	Chief Warrant Officer 2 CWO2	NO WARRANT
W1	Warrant Officer 1 WO1	Warrant Officer 1 WO1	Warrant Officer 1 WO	NO WARRANT

Source: http://www.defense.gov/About-DoD/Insignias/Officers.

#### Enlisted rank

Service members in pay grades E-1 through E-3 are usually either in some kind of training status or on their initial assignment. The training includes the basic training phase where recruits are immersed in military culture and values and are taught the core skills required by their service component.

Basic training is followed by a specialized or advanced training phase that provides recruits with a specific area of expertise or concentration. In the Army and Marines, this area is called a military occupational specialty; in the Navy it is known as a rate; and in the Air Force it is simply called an Air Force specialty.

Leadership responsibility significantly increases in the mid-level enlisted ranks. This responsibility is given formal recognition by use of the terms noncommissioned officer and petty officer. An Army sergeant, an Air Force staff sergeant, and a Marine corporal are considered NCO ranks. The Navy NCO equivalent, petty officer, is achieved at the rank of petty officer third class.

At the E–8 level, the Army, Marines, and Air Force have two positions at the same pay grade. Whether one is, for example, a senior master sergeant or a first sergeant in the Air Force depends on the person's job. The same is true for the positions at the E–9 level. Marine Corps master gunnery sergeants and sergeants major receive the same pay but have different responsibilities. E–8s and E–9s have 15 to 30 years on the job, and are commanders' senior advisers for enlisted matters.

A third E–9 element is the senior enlisted person of each service. The sergeant major of the Army, the sergeant major of the Marine Corps, the master chief petty officer of the Navy, and the chief master sergeant of the Air Force are the spokespersons of the enlisted force at the highest levels of their services.

	Army		Navy Coast Guard		Marines		Air Force			
E9	of the	nt Major Army 1A)	Off of the (MC) ai Coast	hief Petty ficer Navy PON) nd Guard OCG)	Sergeant Major of the Marine Corps (SgtMajMC)		Marine Corps of the Air Force		orce	
E9	Sergeant Major (SGM)	Command Sergeant Major (CSM)	Master Chief Petty Officer (MCPO)	Fleet/ Command Master Chief Petty Officer	Sergeant Major (SgtMaj)	Master Gunnery Sergeant (MGySgt)	Chief Master Sergeant (CMSgt)	First Sergeant	Command Chief Master Sergeant (CCM)	
E8	Master Sergeant (MSG)	First Sergeant (1SG)	Senior Chief Petty Officer (SCPO)		Master Sergeant (MSgt)	First Sergeant	Senior Master Sergeant (SMSgt)	First S	ergeant	
E7	Sergeant l (SI	First Class FC)		ty Officer PO)	Gunnery Sergeant (GySgt)		Master Sergeant (MSgt)	First S	ergeant	
E6		ergeant SG)	First	Petty Officer First Class (PO1)		Staff Sergeant (SSgt)		Technical Sergeant (TSgt)		
E5		eant GT)	Secon	Officer d Class O2)	Sergeant (Sgt)		Staff Sergeant (SSgt)			
E4	Corporal (CPL)	Specialist (SPC)	Third	Officer   Class   O3)	Corp (C	poral pl)	Senior Airman (SrA)			

	Army	Navy Coast Guard	Marines	Air Force
E3	Private First Class	Seaman	Lance Corporal	Airman First Class
	(PFC)	(SN)	(LCpl)	(A1C)
E2	Private E-2	Seaman Apprentice	Private First Class	Airman
	(PV2)	(SA)	(PFC)	(Amn)
E1	Private	Seaman Recruit (SR)	Private	Airman Basic

Source: http://www.defense.gov/About-DoD/Insignias/Enlisted.

- **9.30.** Spell out *Senator*, *Representative*, and *commandant*.
- **9.31.** Unless preceded by *the*, abbreviate *Honorable*, *Reverend*, and *Monsignor* when followed by the first name, initials, or title.

Hon. John Kerry; the Honorable John Kerry; the Honorable Mr. Kerry the Honorables John Roberts, Elena Kagan, and Ruth Bader Ginsberg

Rev. Martin Luther King, Jr.; the Reverend Dr. King; Rev. Dr. King; Reverend King (not Rev. King, nor the Reverend King)

Rt. Rev. James E. Freeman; the Right Reverend James E. Freeman; Very Rev. Henry Boyd; the Very Reverend Henry Boyd

Rt. Rev. Msgr. John Bird; the Right Reverend Monsignor John Bird

**9.32.** The following and similar forms are used after a name:

Esq., Jr., Sr.

2d, 3d (or II, III) (not preceded by comma)

Degrees: LL.D., M.A., Ph.D., etc.

Fellowships, orders, etc.: FSA Scot, F.R.S., K.C.B., C.P.A., etc.

**9.33.** The abbreviation *Esq.* and other titles such as *Mr.*, *Mrs.*, and *Dr.*, should not appear with any other title or with abbreviations indicating scholastic degrees.

John L. Smith, Esq., *not* Mr. John L. Smith, Esq., *nor* John L. Smith, Esq., A.M.; *but* James A. Jones, Jr., Esq.

Ford Maddox, A.B., Ph.D., not Mr. Ford Maddox, A.B., Ph.D.

George Gray, M.D., not Mr. George Gray, M.D., nor Dr. George Gray, M.D.

Dwight A. Bellinger, D.V.M., but Major John P. Pryor, M.D.

**9.34.** *Sr.* and *Jr.* should not be used without first or given name or initials, but may be used in combination with any title.

A.K. Jones, Jr., or Mr. Jones, Junior, *not* Jones, Jr., *nor* Jones, Junior President J.B. Nelson, Jr.

**9.35.** When name is followed by abbreviations designating religious and fraternal orders and scholastic and honorary degrees, their sequence is as follows: Orders, religious first; theological degrees; academic degrees earned in course; and honorary degrees in order of bestowal.

```
Henry L. Brown, D.D., A.M., D.Lit.
T.E. Holt, C.S.C., S.T.Lr., LL.D., Ph.D.
Samuel J. Deckelbaum, P.M.
```

**9.36.** Academic degrees standing alone may be abbreviated.

John was graduated with a B.A. degree; *but* bachelor of arts degree (lowercase when spelled out).

She earned her Ph.D. by hard work.

**9.37.** In addresses, signatures, lists of names, and leaderwork but not in tables nor in centerheads, *Mr.*, *Mrs.*, and other titles preceding a name, and *Esq.*, *Ph.D.*, *Jr.*, and *Sr.* following a name, are set in roman caps and lowercase if the name is in caps and small caps. If the name is in caps, they are set in caps and small caps, if small caps are available—otherwise in caps and lowercase.

# Parts of publications

**9.38.** The following abbreviations are used for parts of publications mentioned in parentheses, brackets, footnotes, sidenotes, list of references, tables, and leaderwork, when followed by figures, letters, or Roman numerals.

```
app., apps. (appendix,
                                         pl., pls. (plate, plates)
     appendixes)
                                         pt., pts. (part, parts)
art., arts. (article, articles)
                                         sec., secs. (section, sections)
bull., bulls. (bulletin, bulletins)
                                         subch., subchs. (subchapter,
ch., chs. (chapter, chapters)
                                              subchapters)
col., cols. (column, columns)
                                         subpar., subpars. (subparagraph,
ed., eds. (edition, editions)
                                              subparagraphs)
fig., figs. (figure, figures)
                                         subpt., subpts. (subpart, subparts)
fn., fns. (footnote, footnotes)
                                         subsec., subsecs. (subsection,
No., Nos. (number, numbers)
                                              subsections)
p., pp. (page, pages)
                                         supp., supps. (supplement,
par., pars. (paragraph,
                                              supplements)
     paragraphs)
                                         vol., vols. (volume, volumes)
```

**9.39.** The word *article* and the word *section* are abbreviated when appearing at the beginning of a paragraph and set in caps and small caps followed by a period and an en space, except that the first of a series is spelled out.

```
ART. 2; SEC. 2; etc.; but ARTICLE 1; SECTION 1
ART. II; SEC. II; etc.; but ARTICLE I; SECTION I
```

**9.40.** At the beginning of a legend, the word *figure* preceding the legend number is not abbreviated.

FIGURE 4.—Landscape.

## **Terms relating to Congress**

**9.41.** The words *Congress* and *session*, when accompanied by a numerical reference, are abbreviated in parentheses, brackets, and text footnotes. In sidenotes, lists of references, tables, leaderwork, and footnotes to tables and leaderwork, the following abbreviations are used:

106th Cong., 1st sess. Public Law 84, 102d Cong. 1st sess., 106th Cong. Private Law 68, 102d Cong.

**9.42.** In references to bills, resolutions, documents and reports in parentheses, brackets, footnotes, sidenotes, tables, and leaderwork, the following abbreviations are used:

H.R. 416 (House bill) S. 116 (Senate bill) The examples above may be abbreviated or spelled

out in text. H. Res. 5 (House resolution)

H. Con. Res. 10 (House concurrent resolution)

H.J. Res. 21 (House joint resolution)

S. Res. 50 (Senate resolution)

S. Con. Res. 17 (Senate concurrent resolution)

S.J. Res. 45 (Senate joint resolution)

H. Conf. Rept. 10 (House conference report)

H. Doc. 35 (House document)

S. Doc. 62 (Senate document)

H. Rept. 214 (House report)

S. Rept. 410 (Senate report) Ex. Doc. B (Executive document)

Ex. F (92d Cong., 2d sess.)

Ex. Rept. 9 (92d Cong., 1st sess.)

Misc. Doc. 16 (miscellaneous

document) Public Res. 47 **9.43.** References to statutes in parentheses, footnotes, sidenotes, tables, leaderwork, and congressional work are abbreviated.

Rev. Stat. (Revised Statutes); 43 Rev. Stat. 801; 18 U.S.C. 38 Supp. Rev. Stat. (Supplement to the Revised Statutes) Stat. L. (Statutes at Large) but Public Law 85–1; Private Law 68

### Calendar divisions

**9.44.** Names of months followed by the day, or day and year, are abbreviated in footnotes, tables, leaderwork, sidenotes, and in bibliographies. (See examples, rule 9.45.) *May, June*, and *July* are always spelled out. In narrow columns in tables, however, the names of months may be abbreviated even if standing alone. Preferred forms follow:

Jan.Apr.Oct.Feb.Aug.Nov.Mar.Sept.Dec.

**9.45.** In text only, dates as part of a citation or reference within parentheses or brackets are also abbreviated.

(Op. Atty. Gen., Dec. 4, 2005)

(Congressional Record, Sept. 25, 2007)

[From the New York Times, Mar. 4, 2008]

[From the Mar. 4 issue]

On Jan. 25 (we had commenced on Dec. 26, 2005) the work was finished. (In footnotes, tables, leaderwork, and sidenotes)

On January 25, a decision was reached (Op. Atty. Gen., Dec. 4, 2006). (Text, but with citation in parentheses)

*but* On January 25 (we had commenced on December 26, 2008) the work was finished. (Not a citation or reference in text)

**9.46.** Weekdays are not abbreviated, but the following forms are used, if necessary, in lists or in narrow columns in tables:

Sun. Wed. Fri. Mon. Thurs. Sat.

Tues.

#### Time zones

**9.47.** The following forms are to be used when abbreviating names of time zones:

AKDT—Alaska daylight time AKST—Alaska standard time

AKT—Alaska time (implies standard or daylight time)

AST—Atlantic standard time

AT—Atlantic time

CDT—central daylight time

CST—central standard time CT—central time

ChST—Chamorro standard time

(DST not observed)

DST—daylight saving (no "s") time

EDT—eastern daylight time

EST—eastern standard time

ET—eastern time

GCT-Greenwich civil time

GMAT—Greenwich mean astronomical time

GMT—Greenwich mean time

HDT—Hawaii-Aleutian daylight time

(not observed in HI)

HST—Hawaii-Aleutian standard time

LST—local standard time

MDT—mountain daylight time

MST—mountain standard time

MT— mountain time

PDT—Pacific daylight time

PST—Pacific standard time

PT—Pacific time

SST—Samoan standard time

(DST not observed)

UTC—coordinated universal time

## Acronyms and coined words

**9.48.** To obtain uniform treatment in the formation of acronyms and coined words, apply the formulas that follow:

Use all capital letters when only the first letter of each word or selected words is used to make up the symbol:

APPR (Army package power reactor)

EPCOT (Experimental Prototype Community of Tomorrow)

MAG (Military Advisory Group)

MIRV (multiple independently targetable reentry vehicle)

SALT (strategic arms limitation talks); (avoid SALT talks)

Use all capital letters where first letters of prefixes and/or suffixes are utilized as part of established expressions:

CPR (cardiopulmonary resuscitation)

ESP (extrasensory perception)

FLIR (forward-looking infrared)

Copy must be followed where an acronym or abbreviated form is copyrighted or established by law:

ACTION (agency of Government; not an acronym)

MARAD (Maritime Administration)

NACo (National Association of Counties)

MEDLARS (*Med*ical *L*iterature *A*nalysis and *R*etrieval *System*)

Use caps and lowercase when proper names are used in shortened form, any word of which uses more than the first letter of each word:

Conrail (Consolidated Rail Corporation)

Pepco (Potomac Electric Power Co.)

Inco (International Nickel Co.)

Aramco (Arabian-American Oil Co.)

Unprofor (United Nations Protection Force)

but USAJOBS

Use lowercase in common-noun combinations made up of more than the first letter of lowercased words:

loran (long-range navigation)

sonar (sound navigation ranging)

secant (separation control of aircraft by nonsynchronous techniques)

**9.49.** The words *infra* and *supra* are not abbreviated.

#### Terms of measure

**9.50.** The only instance where a period is used with a compass directonal abbreviation is in a land tract description with township(s) (T./Tps.) and range(s) (R./Rs.). (See rule 9.20.) Compass directionals are abbreviated as follows:

N	S	ESE
NE	NNW	10° N 25° W
E	W	but
NW by N ¼ W	SW	T. 2 S., R. 1 E.

**9.51.** The words *latitude* and *longitude*, followed by figures, are abbreviated in parentheses, brackets, footnotes, sidenotes, tables, and leaderwork, and the figures are always closed up.

```
lat. 52°33'05" N long. 13°21'10" E
```

- **9.52.** Avoid breaking latitude and longitude figures at end of line; space out line instead. In case of an unavoidable break at end of line, use hyphen.
- **9.53.** Temperature and gravity are expressed in figures. When the degree mark is used, it must appear closed up to the capital letter, not

against the figures. Note the following related abbreviations and letter symbols and their usages:

```
abs, absolute

Bé, Baumé

°C,¹ degree Celsius²

°F, degree Fahrenheit

°R, degree Rankine

K, kelvin; but Kelvin scale

273.15 K

°API

API, American Petroleum

Institute

Twad, Twaddell

100 °C

212 °F¹

671.67 °R

18 °API
```

**9.54.** References to meridian in statements of time are abbreviated as follows:

```
10 a.m. (not 10:00 a.m.) 12 p.m. (12 noon) 2:30 p.m. 12 a.m. (12 midnight)
```

**9.55.** The word *o'clock* is not used with abbreviations of time.

not 10 o'clock p.m.

**9.56.** Metric unit letter symbols are set lowercase roman unless the unit name has been derived from a proper name, in which case the first letter of the symbol is capitalized (for example Pa for pascal and W for watt). The exception is the letter L for liter. The same form is used for singular and plural. The preferred symbol for *cubic centimeter* is  $cm^3$ ; use cc only when requested.

A space is used between a figure and a unit symbol except in the case of the symbols for degree, minute, and second of plane angle.

	3 m		45 mm		°C	but 33°15'21"
Prefixes for multiples and submultiples					Metric units	
Y	yotta (10 <sup>24</sup> )	d	deci (10 <sup>-1</sup> )		m	meter (for length)
Z	zetta (10 <sup>21</sup> )	С	centi (10 <sup>-2</sup> )		g	gram (for weight or mass)
E	exa (10 <sup>18</sup> )	m	$milli (10^{-3})$		L	liter (for capacity)
P	peta (1015)	μ	$micro (10^{-6})$			
T	tera (10 <sup>12</sup> )	n	nano (10 <sup>-9</sup> )			
G	giga (10°)	p	pico (10 <sup>-12</sup> )			
M	mega (10 <sup>6</sup> )	f	femto (10 <sup>-15</sup> )			
k	kilo (10³)	a	atto $(10^{-18})$			
h	hecto (10 <sup>2</sup> )	z	zepto (10 <sup>-21</sup> )			
da	deka (10)	y	yocto (10 <sup>-24</sup> )			

 $<sup>^{1}</sup>$ Without figures preceding it,  $^{\circ}C$  or  $^{\circ}F$  should be used only in boxhead and over figure columns in tables.

<sup>&</sup>lt;sup>2</sup>Preferred form (superseding Centigrade).

	Length		Area		Volume
km	kilometer	km²	square kilometer	$km^3$	cubic kilometer
hm	hectometer	$hm^2$	square hectometer	$hm^3$	cubic hectometer
dam	decameter	dam²	square decameter	dam³	cubic dekameter
m	meter	$m^2$	square meter	$m^3$	cubic meter
dm	decimeter	$dm^2$	square decimeter	dm³	cubic decimeter
cm	centimeter	cm <sup>2</sup>	square centimeter	cm <sup>3</sup>	cubic centimeter
mm	millimeter	mm <sup>2</sup>	square millimeter	mm³	cubic millimeter
	Weight		Land area		Capacity of containers
kg	kilogram	ha	hectare	kL	kiloliter
hg	hectogram	a	acre	hL	hectoliter
dag	dekagram			daL	dekaliter
g	gram			L	liter
dg	decigram			dL	deciliter
cg	centigram			cL	centiliter
mg	milligram			mL	milliliter
μg	microgram				

**9.57.** A similar form of abbreviation applies to any unit of the metric system.

A	ampere	V	volt	mF	millifarad
VA	voltampere	W	watt	mH	millihenry
F	farad	kc	kilocycle	μF	microfarad (one-
Н	henry	kV	kilovolt		millionth of a farad)
Hz	hertz	kVA	kilovoltampere		
J	joule	kW	kilowatt		

**9.58.** The following forms are used when units of English weight and measure and units of time are abbreviated, the same form of abreviation being used for both singular and plural:

	Length		Area and volume
in	inch	in <sup>2</sup>	square inch
ft	foot	in <sup>3</sup>	cubic inch
yd	yard	mi <sup>2</sup>	square mile
mi	mile (statute)	ft <sup>3</sup>	cubic foot

	Time		Weight		Capacity
yr	year	gr	grain	gill	(not abbreviated)
mo	month	dr	dram	pt	pint
d	day	oz	ounce	qt	quart
h	hour	lb	pound	gal	gallon
min	minute	cwt	hundredweight	pk	peck
s	second	dwt	pennyweight	bu	bushel
		ton(s)	(not abbreviated)	bbl	barrel
		but t	metric ton (tonne)		

**9.59.** In astrophysical and similar scientific matter, magnitudes and units of time may be expressed as follows:

## Money

**9.60.** The following are some of the abbreviations and symbols used for indicating money:

(For the abbreviations of other terms indicating currency, see the table "Currency" in Chapter 17 "Useful Tables.")

• •	
\$, dol (dollar)	Mex \$2,650
c, ct, ¢ (cent, cents)	₱ (peso)
TRL175 (Turkish)	£ (pound)
USD15,000	d (pence)
€ (euro)	

Use "USD" if omission would result in confusion.

### Standard word abbreviations

**9.61.** For a more complete list of Government acronyms visit the U.S. Government Manual: https://www.govinfo.gov/content/pkg/GOVMAN-2015-07-01/pdf/GOVMAN-2015-07-01-Commonly-Used-Agency-Acronyms-105.pdf. Use these forms if abbreviations are required:

2,4D (insecticide)	A1 (rating)
2d—second	A.A.—Alcoholics Anonymous
3d—third	AARP—American Association of
3D—three dimensional	Retired Persons
4°—quarto	abbr.—abbreviation
8°—octavo	abs.—abstract

ACTH—adrenocorticotropic

acct.-account

ARC—American Red Cross

ARS—Agricultural Research

hormone Service A.D.—(anno Domini) in the year ASD—autism spectrum disorder of our Lord (A.D. 937) ASME—American Society of ADDH-attention deficit disorder Mechanical Engineers with hyperactivity ASTM-American Society for Testing and Materials ADHD-attention deficit hyper-ATM—automatic teller machine activity disorder AF—audiofrequency Atl.—Atlantic Reporter; A.2d, AFB-Air Force Base Atlantic Reporter, second AFL-CIO-American Federation series of Labor and Congress of AUS—Army of the United States Ave.—avenue **Industrial Organizations** AIDS—acquired immuno-AWACS—airborne warning and deficiency syndrome control system a.k.a.-also known as AWOL-absent without leave B.A. or A.B.—bachelor of arts A.L.R.—American Law Reports BAC—billing address code ALS—amyotrophic lateral sclerosis AM-amplitude modulation (no BBB-Better Business Bureau periods) B.C.—before Christ (1200 B.C.) A.M.—(anno mundi) in the year of B.C.E.—Before Common Era BCG—(bacillus Calmette-Guerin) the world antituberculosis vaccine A.M. or M.A.—master of arts a.m.—(ante meridiem) before noon bf.—boldface Am. Repts.—American Reports BGN—Board on (not of) Geographic Names Amtrak—National Railroad BIA—Bureau of Indian Affairs Passenger Corporation BIS-Bank for International AMVETS—American Veterans: Settlements Amvet(s) (individual) ANSI-American National Blatch, Pr. Cas.—Blatchford's Prize Cases Standards Institute Bldg.—building antilog—antilogarithm (no period) AOA—Administration on Aging B.Lit(t), or Lit(t), B.—bachelor of APEC-Asia-Pacific Economic literature Cooperation BLM-Bureau of Land Management API—American Petroleum BLS—Bureau of Labor Statistics Institute Blvd.-boulevard APO—Army post office (no b.o.—buyer's option periods) App. D.C.—District of Columbia B.S. or B.Sc.—bachelor of science Appeal Cases c. and s.c.—caps and small caps App. Div.—Appellate Division ca.—(circa) about approx.—approximately ca-centiare

CACM—Central American	Corp.—corporation (commercial)
Common Market	cos—cosine (no period)
CAD—computer-aided design	cosh—hyperbolic cosine (no
CAP—Civil Air Patrol	period)
CAT scan—computerized axial	cot—cotangent (no period)
tomography	coth—hyperbolic cotangent (no
C.C.A.—Circuit Court of Appeals	period)
CCC—Commodity Credit	c.p.—chemically pure
Corporation	C.P.A.—certified public
C.Cls.—Court of Claims	accountant
C.Cls.R.—Court of Claims Reports	CPI—Consumer Price Index
C.C.P.A.—Court of Customs and	CPR—cardiopulmonary
Patents Appeals	resuscitation
CCSDS—Consultative Committee	cr.—credit; creditor
for Space Data Systems	C-SPAN—Cable Satellite Public
CDC—Centers for Disease Control	Affairs Network
and Prevention	csc—cosecant (no period)
C.E.—Common Era	csch—hyperbolic cosecant (no
CEA—Council of Economic	period)
Advisers	Ct.—court
cf.—(confer) compare or see	Dall.—Dallas (U.S. Supreme
CFR—Code of Federal Regulations	Court Reports)
CFR Supp.—Code of Federal	DAR—Daughters of the American
Regulations Supplement	Revolution
CHAMPUS—Civilian Health	d.b.a.—doing business as
and Medical Program of the	d.b.h.—diameter at breast height
Uniformed Services	D.D.—doctor of divinity
CIA—Central Intelligence Agency	D.D.S.—doctor of dental surgery
C.J.—(corpus juris) body of law;	DDT—dichlorodiphenyl-
Chief Justice	trichloroethane
CMYK—cyan, magenta, yellow,	DHS—Department of Homeland
black	Security
CNN—Cable News Network	Dist. Ct.—District Court
CO—commanding officer	D.Lit(t). or Lit(t).D.—doctor of
Co.—company (commercial)	literature
c.o.d.—cash on delivery	DNC—Domestic Names
COLA—cost-of-living adjustment	Committee (BGN)
Comp. Dec.—Comptroller's	do.—(ditto) the same
Decisions (Treasury)	DOC—Department of Commerce
Comp. Gen.—Comptroller	DoD—Department of Defense
General Decisions	DOE—Department of Energy
con.—continued	DOI—Department of the Interior
Conus—continental United States	DOJ—Department of Justice

Eurodollars—U.S. dollars used to DOL—Department of Labor DoS—Department of State finance foreign trade Ex. Doc. (with letter)—executive DOT—Department of document Transportation DP—displaced person (no period) EXIM Bank—Export-Import D.P.H.—doctor of public health Bank of the United States D.P.Hy.—doctor of public hygiene f., ff.—and following page (pages) FAA-Federal Aviation DPT—diphtheria, pertussis, tetanus innoculation Administration dr.-debit: debtor FACS—Faculty of the American Dr.—doctor; drive College of Surgeons DST—daylight saving (no "s") time Fannie Mae-Federal National D.V.M.—doctor of veterinary Mortgage Association FAO-Food and Agriculture medicine E-east Organization e-CFR-electronic Code of FAQ—frequently asked question Federal Regulations FAR—Federal Acquisition EDGAR—Electronic Data Regulation f.a.s.—free alongside ship Gathering, Analysis and Retrieval (SEC) FAS—Foreign Agricultural EEOC-Equal Employment Service Opportunity Commission FBI-Federal Bureau of Investigation EFTA—European Free Trade Association FCA-Farm Credit EFTS—electronic funds transfer Administration FCC—Federal Communications system e.g.—(exempli gratia) for example Commission FCIC—Federal Crop Insurance EHF—extremely high frequency Corporation emcee-master of ceremony e.o.m.-end of month FCSC-Foreign Claims EOP-Executive Office of the Settlement Commission President FDA—Food and Drug EPA—Environmental Protection Administration FDIC—Federal Deposit Insurance Agency ESE-east-southeast Corporation et al.—(et alii) and others FDLP—Federal Depository Library Program et seq.—(et sequentia) and the Fed.—Federal Reporter; F.3d, following Federal Reporter, third series etc.—(et cetera) and so forth EU-European Union FEOF-Foreign Exchange Euratom—European Atomic Operations Fund **Energy Community** FERC—Federal Energy Euro—currency (common) Regulatory Commission

FHA—Federal Housing

G.M.&S.—general, medical, and

FHA—Federal Housing	G.M.&S.—general, medical, and
Administration	surgical
FHFA—Federal Housing	GNMA—Government National
Finance Agency	Mortgage Association
FmHA—Farmers Home	(Ginnie Mae)
Administration	Gov.—Governor
FHWA—Federal Highway	GPO—Government Publishing
Administration	Office
FICA—Federal Insurance	GPS—Global Positioning System
Contributions Act	gr. wt.—gross weight
FLSA—Fair Labor Standards Act	GSA—General Services
FM—frequency modulation	Administration
FMC—Federal Maritime	GSE—Government-Sponsored
Commission	Enterprise
FMCS—Federal Mediation and	G7—Group of Seven
Conciliation Service	H.C.—House of Commons
FNS—Food and Nutrition Service	H. Con. Res. (with number)—
f°—folio	House concurrent resolution
FOB—free on board	H. Doc. (with number)—House
FPO—fleet post office (no periods)	document
FR—Federal Register	hazmat—hazardous material
(publication)	HDTV—high definition television
FRG—Federal Republic of	HE—high explosive (no periods)
Germany	HF—high frequency (no periods)
FRS—Federal Reserve System	HHS—Health and Human
FS—Forest Service	Services (Department of)
FSLIC—Federal Savings and Loan	HIV—human immunodeficiency
Insurance Corporation	virus
F. Supp.—Federal Supplement	H.J. Res. (with number)—House
FTC—Federal Trade Commission	joint resolution
FWS—Fish and Wildlife Service	HMO—health-maintenance
GAO—Government	organization
Accountability Office	HOV—high-occupancy vehicle
GATT—General Agreement on	How.—Howard (U.S. Supreme
Tariffs and Trade	Court Reports)
GDP—Gross Domestic Product	H.R. (with number)—House bill
GFE—government furnished	H. Rept. (with number)—House
equipment	report
GFI—government furnished	H. Res. (with number)—House
information	resolution
GI—general issue; Government	HUD—Housing and Urban
issue	Development (Department of)
GIS—geographic information	IADB—Inter-American Defense
system	Board

IAEA—International Atomic JOBS—Job Opportunities in the **Energy Agency** Business Sector ibid.—(ibidem) in the same place IIT—just in time ICBM—intercontinental ballistic Jpn.—Japan or Japanese where missile necessary to abbreviate id.—(idem) the same Jr.—junior ID—Information Dissemination Judge Adv. Gen.—Judge Advocate General IDA—International Development lat.—latitude Association IDE—integrated drive electronics LC—Library of Congress i.e.—(id est) that is LCD—liquid crystal display IEEE-Institute of Electrical and lc.—lowercase **Electronic Engineers** L.Ed.—Lawyer's edition (U.S. IF—intermediate frequency (no Supreme Court Reports) LGBTQ-Lesbian, Gay, Bisexual, periods) IFC-International Finance Transgender, and Questioning liq.—liquid Corporation lf.—lightface IMF—International Monetary LF—low frequency Fund Insp. Gen. (also IG)—inspector LL.B.—bachelor of laws general LL.D.—doctor of laws loc. cit.—(loco citato) in the place Interpol—International Criminal Police Organization log (no period)—logarithm IOU-I owe you IQ-intelligence quotient long.—longitude IRA-individual retirement loran (no periods)—long-range navigation account lox (no periods)—liquid oxygen IRBM—intermediate range LPG—liquefied petroleum gas ballistic missile IRE—Institute of Radio Engineers Ltd.—limited Lt. Gov.—lieutenant governor IRS—Internal Revenue Service M—money supply: M1, M2, etc. ISIL—Islamic State of Iraq and M.—monsieur; MM., messieurs the Levant (Intelligence m.—(meridies) noon Community standard) ISIS—Islamic State of Iraq and Syria M-more MAC-Military Airlift Command ISO—International Organization MARAD—Maritime for Standardization Administration ISS—International Space Station ISSN-International Standard MC—Member of Congress Serial Number (emcee, master of ceremonies) M.D.—doctor of medicine JAG-Judge Advocate General MDAP-Mutual Defense jato-jet-assisted takeoff J.D.—(jurum or juris doctor) Assistance Program doctor of laws Medi-Cal-Medicaid California

memo-memorandum	NATO—North Atlantic Treaty
MF—medium frequency;	Organization
microfiche	NCUA—National Credit Union
MFN—most favored nation	Administration
MIA—missing in action (plural	NE—northeast
MIAs)	n.e.c.—not elsewhere classified
MIRV—multiple independently	n.e.s.—not elsewhere specified
targetable reentry vehicle	net wt.—net weight
Misc. Doc. (with number)—	N.F.—National Formulary
miscellaneous document	NFC—National Finance Center
Mlle.—mademoiselle	NIH—National Institutes of
MMAR—Materials Management	Health
Acquisition Regulation	NIST—National Institute of
Mme.—madam	Standards and Technology
Mmes.—mesdames	NGA—National Geospatial-
mo.—month	Intelligence Agency
MOS—military occupational	n.l.—natural log or logarithm
specialty	NLRB—National Labor Relations
M.P.—Member of Parliament	Board
MP—military police	NNTP—Network News Transfer
Mr.—mister (plural Messrs.)	Protocol
MRI—magnetic resonance	NNW—north-northwest
imaging	No.—Nos., number, numbers
Mrs.—mistress	NOAA—National Oceanic and
Ms.—feminine title (plural Mses.)	Atmospheric Administration
M.S.—master of science	n.o.i.b.n.—not otherwise indexed
MS.—MSS., manuscript,	by name
manuscripts	n.o.p.—not otherwise provided
MSC—Military Sealift Command	(for)
Msgr.—monsignor	n.o.s.—not otherwise specified
m.s.l.—mean sea level	NPR—National Public Radio
MTN—multilateral trade	NPS—National Park Service
negotiations	NRC—Nuclear Regulatory
N—north	Commission
NA—not available; not applicable	NS—nuclear ship
NACo.—National Association of	NSA—National Security Agency
Counties	NSC—National Security Council
NAFTA—North American Free	NSF—National Science
Trade Agreement	Foundation
NAS—National Academy of	n.s.k.—not specified by kind
Sciences	n.s.p.f.—not specifically provided
NASA—National Aeronautics and	for
Space Administration	NW—northwest
opart 114 minutation	

philosophy

OAPEC—Organization of Arab Ph.G.—graduate in pharmacy Petroleum Exporting PHS—Public Health Service PIN—personal identification Countries OAS—Organization of American number States Pl.—place OASDHI—Old-Age, Survivors, p.m.—(post meridiem) after noon Disability, and Health P.O. Box (with number)—but post office box (in general sense) Insurance Program OASI-Old-Age and Survivors POP-Point of Presence: Post Insurance Office Protocol OD-officer of the day POW—prisoner of war (plural OD-overdose; Odd, overdosed POWs) Private Res. (with number)— O.D.—doctor of optometry private resolution OK—Oked, Oking, Oks OMB-Office of Management and Prof.—professor Budget pro tem—(pro tempore) temporarily Op. Atty. Gen.—Opinions of the Attorney General P.S.—(post scriptum) postscript; public school (with number) op. cit.—(opere citato) in the work cited PTA—parent-teachers' association OPEC—Organization of PTSD—post-traumatic stress disorder Petroleum Exporting Public Res. (with number)—public Countries OSD—Office of the Secretary of resolution Defense PX—post exchange PA—public address system; QT—on the quiet R.—Rs., range, ranges physician assistant racon-radar beacon Pac.—Pacific Reporter; P.2d, radar-radio detection and Pacific Reporter, second ranging PAC—political action committee R&D—research and development rato-rocket-assisted takeoff (plural PACs) Rd.—road PBS—Public Broadcasting Service; Public Buildings Service RDT&E—research, development, PCV—Peace Corps Volunteer testing, and evaluation Pet.—Peters (U.S. Supreme Court Rev.—reverend Rev. Stat.—Revised Statutes Reports) RF—radio frequency Ph—phenyl R.F.D.—rural free delivery Phar.D.—doctor of pharmacy Ph.B. or B.Ph.—bachelor of RGB-red, green, blue philosophy Rh—Rhesus (blood factor) Ph.D. or D.Ph.—doctor of RIF—reduction(s) in force; RIFed,

RIFing, RIFs

DAY 1	1 1
R.N.—registered nurse	sonar—sound, navigation, and
ROTC—Reserve Officers'	ranging (no period)
Training Corps	SOP—standard operating
RR—railroad	procedure
RRB—Railroad Retirement Board	SOS—wireless distress signal
RSS—Really Simple Syndication	SP—shore patrol
Rt. Rev.—right reverend	SPA—simplified purchase
Ry.—railway	agreement
S—south	SPAR—Coast Guard Women's
S.—Senate bill (with number)	Reserve (semper paratus—
SAE—Society of Automotive	always ready)
Engineers	sp. gr.—specific gravity
S&L(s)—savings and loan(s)	Sq.—square (street)
SALT—strategic arms limitation	Sr.—senior
talks	S. Rept. (with number)—Senate
SAR—Sons of the American	report
Revolution	S. Res. (with number)—Senate
SBA—Small Business	resolution
Administration	SS—steamship
sc.—(scilicet) namely (see also ss)	ss—(scilicet) namely (in law) (see
s.c.—small caps	also sc.)
S. Con. Res. (with number)—	SSA—Social Security
Senate concurrent resolution	Administration
s.d.—(sine die) without date	SSE—south-southeast
S. Doc. (with number)—Senate	SSS—Selective Service System
document	St.—Ste., SS., Saint, Sainte, Saints
SE—southeast	St.—street
SEATO—Southeast Asia Treaty	Stat.—Statutes at Large
Organization	STEAM—Science, Technology,
SEC—Securities and Exchange	Engineering, Art and
Commission	Mathematics
sec—secant	STEM—Science, Technology,
sech—hyperbolic secant	Engineering and Mathematics
2d—second	STP—standard temperature and
SEO—Search Engine Optimization	pressure
SHF—superhigh frequency	Sup. Ct.—Supreme Court
shoran—short range (radio)	Reporter
SI—Systeme International d'Unités	Supp. Rev. Stat.—Supplement to
sic—thus	the Revised Statutes
sin—sine	Supt.—superintendent
sinh—hyperbolic sine	Surg.—surgeon
S.J. Res. (with number)—Senate	Surg. Gen.—Surgeon General
joint resolution	SW—southwest
John resolution	511 SOULITIVEST

USCG-U.S. Coast Guard

S.W.2d—Southwestern Reporter, USDA—U.S. Department of second series Agriculture SWAT—special weapons and USES—U.S. Employment Service tactics (team) U.S. 61-U.S. No. 61, U.S. T.—Tps., township, townships Highway No. 61 USGS-U.S. Geological Survey tan-tangent tanh—hyperbolic tangent USMC—U.S. Marine Corps TB-tuberculosis USN-U.S. Navy USNR-U.S. Navy Reserve T.D.—Treasury Decisions TDY—temporary duty U.S.P.—United States Ter.—terrace Pharmacopeia 3d-third USPS-U.S. Postal Service U.S.S.-U.S. Senate t.m.—true mean TNT-trinitrotoluol v. or vs.—(versus) against TPP—Trans-Pacific Partnership VA—Department of Veterans TV-television Affairs TVA—Tennessee Valley Authority VAT-value added tax VCR-video cassette recorder uc.-uppercase VHF—very high frequency UHF—ultrahigh frequency U.N.—United Nations VIP—very important person UNESCO—United Nations viz-(videlicet) namely Educational, Scientific, and VLF—very low frequency VTR—video tape recording Cultural Organization W-west UNCHR—United Nations High Commissioner for Refugees w.a.e.-when actually employed UNICEF-United Nations Wall.—Wallace (U.S. Supreme Children's Fund Court Reports) wf-wrong font U.S.—U.S. Supreme Court Reports Wheat.—Wheaton (U.S. Supreme U.S.A.—United States of America USA-U.S. Army Court Reports) USAF-U.S. Air Force WHO-World Health Organization USAID—U.S. Agency for WIPO-World Intellectual International Development Property Organization U.S.C.—United States Code WNW-west-northwest U.S.C.A.—United States Code Annotated w.o.p.—without pay Yale L.J.—Yale Law Journal USCCR—U.S. Commission on ZIP Code—Zone Improvement Civil Rights U.S.C. Supp.—United States Code Plan Code (Postal Service) Supplement ZIP+4-9-digit ZIP Code

### Standard letter symbols for units of measure

**9.62.** The same form is used for singular and plural senses.

A—ampere cd/m2—candela per square meter Å—angstrom cg-centigram a-are cd•h-candela-hour a—atto (prefix, one-quintillionth) Ci-curie cL-centiliter aA—attoampere abs-absolute (temperature and cm-centimeter gravity) c/m—cycles per minute ac—alternating current cm<sup>2</sup>—square centimeter AF—audiofrequency cm3-cubic centimeter cmil-circular mil Ah-ampere-hour cp-candlepower A/m—ampere per meter AM—amplitude modulation cP-centipoise asb-apostilb cSt-centistokes cwt-hundredweight At-ampere-turn at-atmosphere, technical D—darcy atm—atmosphere d—day at wt-atomic weight d—deci (prefix, one-tenth) au-astronomical units d-pence avdp-avoirdupois da-deka (prefix, 10) b-barn dag-dekagram B-bel daL-dekaliter b-bit dam-dekameter bbl-barrel dam<sup>2</sup>—square dekameter bbl/d—barrel per day dam3-cubic dekameter dB-decibel Bd-baud bd. ft.—board foot (obsolete); use fbm dBu-decibel unit Bé-Baumé dc-direct current Bev (obsolete); see GeV dg-decigram Bhn—Brinell hardness number dL-deciliter bhp—brake horsepower dm-decimeter bm-board measure dm<sup>2</sup>—square decimeter bp-boiling point dm3-cubic decimeter dol-dollar Btu-British thermal unit bu-bushel doz-dozen c-¢, ct; cent(s) dr-dram c-centi (prefix, one-hundredth) dwt-deadweight tons C-coulomb dwt-pennyweight °C—degree Celsius dyn-dyne cal—calorie (also: cal,,, International EHF—extremely high frequency emf-electromotive force Table; cal, —thermochemical) cd/in<sup>2</sup>—candela per square inch emu-electromagnetic unit

hg-hectogram erg-erg esu-electrostatic unit hL-hectoliter eV-electronvolt hm-hectometer °F—degree Fahrenheit hm2-square hectometer F-farad hm3-cubic hectometer f-femto (prefix, one-quadrillionth) hp-horsepower fbm-board foot; board foot measure hph—horsepower-hour fc-footcandle Hz—hertz (cycles per second) fl.—footlambert id-inside diameter fm-fentometer ihp—indicated horsepower FM—frequency modulation in-inch ft-foot in<sup>2</sup>—square inch ft2-square foot in3-cubic inch in/h-inch per hour ft3-cubic foot ftH<sub>2</sub>O—conventional foot of water inH<sub>2</sub>O—conventional inch of water ft•lb-foot-pound inHg-conventional inch of mercury ft•lbf—foot-pound force in-lb—inch-pound ft/min—foot per minute in/s—inch per second ft2/min-square foot per minute J—joule J/K—joule per kelvin ft³/min—cubic foot per minute ft-pdl—foot poundal K-kayser ft/s—foot per second K—kelvin (use without degree symbol) ft2/s-square foot per second k-kilo (prefix, 1,000) ft3/s—cubic foot per second k—thousand (7k=7,000) kc-kilocycle; see also kHz (kilohertz), ft/s2-foot per second squared ft/s3—foot per second cubed kilocycles per second kcal-kilocalorie G—gauss keV-kiloelectronvolt G—giga (prefix, 1 billion) g-gram; acceleration of gravity kG—kilogauss Gal-gal cm/s2 kg-kilogram gal-gallon kgf-kilogram-force gal/min—gallons per minute kHz-kilohertz (kilocycles per second) gal/s—gallons per second kL-kiloliter GB—gigabyte klbf-kilopound-force km-kilometer Gb—gilbert g/cm³—gram per cubic centimeter km<sup>2</sup>—square kilometer GeV—gigaelectronvolt km3—cubic kilometer GHz—gigahertz (gigacycle per second) km/h—kilometer per hour gr-grain; gross kn-knot (speed) h-hecto (prefix, 100) kΩ-kilohm H-henry kt-kiloton; carat h-hour kV-kilovolt ha-hectare kVA—kilovoltampere HF—high frequency kvar-kilovar

kW-kilowatt Mc—megacycle; see also MHz kWh-kilowatthour (megahertz), megacycles per L-lambert second I.—liter mc-millicycle; see also mHz lb-pound (millihertz), millicycles per lb ap—apothecary pound second lb—avdp, avoirdupois pound mD-millidarcy meq-milliquivalent lbf—pound-force MeV-megaelectronvolts lbf/ft—pound-force foot lbf/ft2—pound-force per square foot mF-millifarad lbf/ft<sup>3</sup>—pound-force per cubic foot uF-microfarad mG-milligauss lbf/in<sup>2</sup>—pound-force per square inch (see psi) mg-milligram lb/ft—pound per foot µg-microgram Mgal/d-million gallons per day lb/ft2—pound per square foot lb/ft3—pound per cubic foot mH-millihenry μH-microhenry lct—long calcined ton MHz-megahertz ldt-long dry ton mHz-millihertz LF—low frequency lin ft-linear foot mi-mile (statute) l/m—lines per minute mi2-square mile lm-lumen mi/gal-mile(s) per gallon mi/h-mile(s) per hour lm/ft2—lumen per square foot mil-mil lm/m<sup>2</sup>—lumen per square meter lm•s-lumen second min-minute (time) lm/W-lumen per watt µin-microinch mL-milliliter l/s—lines per second mm-millimeter L/s—liter per second mm<sup>2</sup>—square millimeter lx—lux mm3-cubic millimeter M-mega (prefix, 1 million) M-million (3 M=3 million) μm<sup>2</sup>—square micrometer μm<sup>3</sup>—cubic micrometer m-meter m—milli (prefix, one-thousandth) μμ—micromicron (use of compound M1—monetary aggregate prefixes obsolete; use pm, picometer) m2-square meter m3-cubic meter μμf-micromicrofarad (use of compound prefixes obsolete; use μ—micro (prefix, one-millionth) pF) μm-micrometer mA-milliampere mmHg-conventional millimeter of μA-microampere mercury MB—megabyte mΩ—megohm mbar-millibar mo-month

mol—mole (unit of substance)

ubar-microbar

mol wt-molecular weight pW-picowatt mp—melting point qt-quart ms-millisecond quad—quadrillion (1015) R-rankine us-microsecond Mt-megaton R-roentgen (measurement of mV-millivolt radiation) uV-microvolt °R-degree Rankine rad-radian MW-megawatt rd-rad (radiation-absorbed dose) mW-milliwatt μW-microwatt rem-roentgen equivalent man MWd/t-megawatt-days per ton r/min—revolutions per minute Mx-maxwell rms-root mean square n—nano (prefix, one-billionth) r/s—revolutions per second N-newton s-second (time) s-shilling nA-nanoampere nF-nanofarad S-siemens N•m-newton meter sb-stilb N/m<sup>2</sup>—newton per square meter scp—spherical candlepower nmi-nautical mile soft—second-foot Np-neper shp-shaft horsepower ns-nanosecond slug-slug N•s/m<sup>2</sup>—newton second per square sr-steradian meter sSf-standard saybolt fural nt-nit sSu-standard saybolt universal od-outside diameter stdft3-standard cubic foot (feet) Oe—oersted (use of A/m, amperes per Sus—saybolt universal second(s) meter, preferred) T—tera (prefix, 1 trillion) Tft3-trillion cubic feet oz—ounce (avoirdupois) p—pico (prefix, one-trillionth) T—tesla P-poise t-tonne (metric ton) Pa—pascal tbsp-tablespoonful pA-picoampere thm-therm ton-ton pct-percent pdl-poundal tsp-teaspoonful Twad-twaddell pF—picofarad pF—water-holding energy u-(unified) atomic mass unit pH—hydrogen-ion concentration UHF—ultrahigh frequency ph-phot; phase V-volt pk-peck VA—voltampere pm-picometer var—var p/m—parts per million VHF—very high frequency V/m—volt per meter ps—picosecond psi-pounds per square inch W-watt Wb-weber pt-pint

Wh—watthour
W/(m•K)—watt per meter kelvin
W/sr—watt per steradian
W/(sr•m²)—watt per steradian square
meter

x—unknown quantity (italic) yd—yard yd²—square yard yd³—cubic yard yr—year

### Standard Latin abbreviations

**9.63.** When Latin abbreviations are used, follow this list.

a.—annus, year; ante, before A.A.C.—anno ante, Christum in the vear before Christ A.A.S.—Academiae Americanae Socius, Fellow of the American Academy [Academy of Arts and Sciences] A.B.—artium baccalaureus, bachelor of arts ab init.—ab initio, from the beginning abs. re.—absente reo, the defendant being absent A.C.—ante Christum, before Christ A.D.—anno Domini, in the year of our a.d.—ante diem, before the day ad fin.-ad finem, at the end, to one end ad h.l.—ad hunc locum, to this place, on this passage ad inf.-ad infinitum, to infinity ad init.—ad initium, at the beginning ad int.—ad interim, in the meantime ad lib.—ad libitum, at pleasure

the discovery al.—alia, alii, other things, other persons

ad loc.—ad locum, at the place

ad val.-ad valorem, according to

A.I.—anno inventionis, in the year of

A.M.—anno mundi, in the year of the world; Annus mirabilis, the wonderful year [1666]
a.m.—ante meridiem, before noon

an.—anno, in the year; ante, before ann.—annales, annals; anni, years

A.R.S.S.—Antiquariorum Regiae Societatis Socius, Fellow of the Royal Society of Antiquaries

A.U.C.—anno urbis conditae, ab urbe conolita, in [the year from] the building of the City [Rome], 753 B.C.

B.A.—baccalaureus artium, bachelor of arts

B.S. or B. Sc.—baccalaureus scientiae, bachelor of science

C.—centum, a hundred; condemno, I condemn, find guilty

c.—circa, about

cent.—centum, a hundred

cf.-confer, compare

C.M.—chirurgiae magister, master of surgery

coch.—cochlear, a spoon, spoonful coch. amp.—cochlear amplum, a tablespoonful

coch. mag.—cochlear magnum, a large spoonful

coch. med.—cochlear medium, a dessert spoonful

coch. parv.—cochlear parvum, a teaspoonful

con.—contra, against; conjunx, wife C.P.S.—custos privati sigilli, keeper of the privy seal

C.S.—custos sigilli, keeper of the seal cwt.—c. for centum, wt. for weight, hundredweight

- D.—Deus, God; Dominus, Lord; d., decretum, a decree; denarius, a penny; da, give
- D.D.—divinitatis doctor, doctor of divinity
- D.G.—Dei gratia, by the grace of God; Deo gratias, thanks to God
- D.N.—Dominus noster, our Lord
- D.S. or D. Sc.—doctor scientiae, doctor of science
- d.s.p.—decessit sine prole, died without issue
- D.V.—Deo volente, God willing
- dwt.—d. for denarius, wt. for weight pennyweight
- e.g.—exempli gratia, for example
- et al.—et alibi, and elsewhere; et alii, or aliae, and others
- etc.—et cetera, and others, and so forth et seq.—et sequentes, and those that follow
- et ux.-et uxor, and wife
- F.—filius, son
- f.—fiat, let it be made; forte, strong
- fac.—factum similis, facsimile, an exact copy
- fasc.—fasciculus, a bundle
- fl.—flores, flowers; floruit, flourished; fluidus, fluid
- f.r.—folio recto, right-hand page
- F.R.S.—Fraternitatis Regiae Socius, Fellow of the Royal Society
- f.v.—folio verso, on the back of the leaf guttat.—guttatim, by drops
- H.-hora, hour
- h.a.—hoc anno, in this year; hujus anni, this year's
- hab. corp.—habeas corpus, have the body—a writ
- h.e.—hic est, this is; hoc est, that is
- h.m.—hoc mense, in this month; huius mensis, this month's
- h.q.—hoc quaere, look for this

- H.R.I.P.—hic requiescat in pace, here rests in peace
- H.S.—hic sepultus, here is buried; hic situs, here lies; h.s., hoc sensu, in this sense
- H.S.S.—Historiae Societatis Socius, Fellow of the Historical Society
- h.t.—hoc tempore, at this time; hoc titulo, in or under this title
- I—Idus, the Ides; i., id, that; immortalis, immortal
- ib. or ibid.—ibidem, in the same place
- id.—idem, the same
- i.e.-id est, that is
- imp.—imprimatur, sanction, let it be printed
- I.N.D.—in nomine Dei, in the name of God
- in f.—in fine, at the end
- inf.—infra, below
- init.—initio, in the beginning
- in lim.—in limine, on the threshold, at the outset
- in loc.—in loco, in its place
- in loc. cit.—in loco citato, in the place
- in pr.—in principio, in the beginning
- in trans.—in transitu, on the way
- i.q.—idem quod, the same as
- i.q.e.d.—id quod erat demonstrandum, what was to be proved
- J.—judex, judge
- J.C.D.—juris civilis doctor, doctor of civil law
- J.D.—jurum or juris doctor, doctor of
- J.U.D.—juris utriusque doctor, doctor of both civil and canon law
- L.—liber, a book; locus, a place
- £—libra, pound; placed before figures thus £10; if l., to be placed after, as 401.

- L.A.M.—liberalium artium magister, master of the liberal arts
- L.B.—baccalaureus literarum, bachelor of letters
- lb.—libra, pound (singular and plural)
- L.H.D.—literarum humaniorum doctor, doctor of the more humane letters
- Litt. D.—literarum doctor, doctor of letters
- LL.B.—legum baccalaureus, bachelor of laws
- LL.D.—legum doctor, doctor of laws
- LL.M.—legum magister, master of laws
- loc. cit.—loco citato, in the place cited
- loq.—loquitur, he, or she, speaks
- L.S.—locus sigilli, the place of the seal
- l.s.c.—loco supra citato, in the place above cited
- £ s. d.—librae, solidi, denarii, pounds, shillings, pence
- M.—magister, master; manipulus, handful; medicinae, of medicine; m., meridies, noon
- M.A.—magister artium, master of arts
- M.B.—medicinae baccalaureus, bachelor of medicine
- M. Ch.—magister chirurgiae, master of surgery
- M.D.—medicinae doctor, doctor of medicine
- m.m.—mutatis mutandis, with the necessary changes
- m.n.—mutato nomine, the name being changed
- MS.—manuscriptum, manuscript; MSS., manuscripta, manuscripts
- Mus. B.—musicae baccalaureus, bachelor of music
- Mus. D.—musicae doctor, doctor of music
- Mus. M.—musicae magister, master of music

N.—Nepos, grandson; nomen, name; nomina, names; noster, our; n., natus, born; nocte, at night

N.B.—nota bene, mark well ni. pri.—nisi prius, unless before

nob.—nobis, for (or on) our part nol. pros.—nolle prosequi, will not prosecute

- non cul.—non culpabilis, not guilty n.l.—non licet, it is not permitted; non liquet, it is not clear; non longe.
- liquet, it is not clear; non longe, not far
- non obs.—non obstante, notwithstanding
- non pros.—non prosequitur, he does not prosecute
- non seq.—non sequitur, it does not follow logically
- O.—octarius, a pint
- ob.—obiit, he, or she, died; obiter, incidentally
- ob. s.p.—obiit sine prole, died without issue
- o.c.—opere citato, in the work cited
- op.—opus, work; opera, works
- op. cit.—opere citato, in the work cited
- P.—papa, pope; pater, father; pontifex, bishop; populus, people; p., partim, in part; per, by, for; pius, holy; pondere, by weight; post, after; primus, first; pro, for
- p.a.—or per ann., per annum, yearly; pro anno, for the year
- p. ae.—partes aequales, equal partspass.—passim, everywhere
- percent.—per centum, by the hundred pil.—pilula, pill
- Ph. B.—philosophiae baccalaureus, bachelor of philosophy
- P.M.—post mortem, after death
- p.m.—post meridiem, afternoon
- pro tem.—pro tempore, for the time
- prox.—proximo, in or of the next [month]

- P.S.—postscriptum, postscript; P.SS., postscripta, postscripts
- q.d.—quasi dicat, as if one should say; quasi dictum, as if said; quasi dixisset, as if he had said
- q.e.-quod est, which is
- Q.E.D.—quod erat demonstrandum, which was to be demonstrated
- Q.E.F.—quod erat faciendum, which was to be done
- Q.E.I.—quod erat inveniendum, which was to be found out
- q.l.—quantum libet, as much as you please
- q. pl.—quantum placet, as much as seems good
- q.s.—quantum sufficit, sufficient quantity
- q.v.—quantum vis, as much as you will; quem, quam, quod vide, which see; qq. v., quos, quas, or quae vide, which see (plural)
- R.—regina, queen; recto, right-hand page; respublica, commonwealth
- R∕—recipe, take
- R.I.P.—requiescat, or requiescant, in pace, may he, she, or they, rest in peace
- R.P.D.—rerum politicarum doctor, doctor of political science
- R.S.S.—Regiae Societatis Sodalis, Fellow of the Royal Society
- S.—sepultus, buried; situs, lies; societas, society; socius or sodalis, fellow; s., semi, half; solidus, shilling
- s.a.—sine anno, without date; secundum artem, according to art
- S.A.S.—Societatis Antiquariorum Socius, Fellow of the Society of Antiquaries
- sc.—scilicet, namely; sculpsit, he, or she, carved or engraved it

- S.B. or Sc. B.—scientiae baccalaureus, bachelor of science
- S.D. or Sc. D.—scientiae doctor, doctor of science
- S.D.—salutem dicit, sends greetings
- s.d.—sine die, indefinitely
- sec.—secundum, according to
- sec. leg.—secundum legem, according to law
- sec. nat.—secundum naturam, according to nature, or naturally
- sec. reg.—secundum regulam, according to rule
- seq.—sequens, sequentia, the following
- S.H.S.—Societatis Historiae Socius, Fellow of the Historical Society
- s.h.v.—sub hac voce or sub hoc verbo, under this word
- s.l.a.n.—sine loco, anno, vel nomine, without place, date, or name
- s.l.p.—sine legitima prole, without lawful issue
- s.m.p.—sine mascula prole, without male issue
- s.n.—sine nomine, without name
- s.p.—sine prole, without issue
- S.P.A.S.—Societatis Philosophiae Americanae Socius, Fellow of the American Philosophical Society
- s.p.s.—sine prole superstite, without surviving issue
- S.R.S.—Societatis Regiae Socius or Sodalis, Fellow of the Royal Society
- ss-scilicet, namely (in law)
- S.S.C.—Societas Sanctae Crucis, Society of the Holy Cross
- stat.—statim, immediately
- S.T.B.—sacrae theologiae baccalaureus, bachelor of sacred theology
- S.T.D.—sacrae theologiae doctor, doctor of sacred theology

S.T.P.—sacrae theologiae professor,
professor of sacred theology
sub.—subaudi, understand, supply
sup.—supra, above
t. or temp.—tempore, in the time of
tal. qual.—talis qualis, just as they
come; average quality
U.J.D.—utriusque juris doctor, doctor
of both civil and canon law
ult.—ultimo, last month (may be
abbreviated in writing but should
be spelled out in printing)
ung.—unguentum, ointment
u.s.—ubi supra, in the place above
mentioned

ut dict.—ut dictum, as directed
ut sup.—ut supra, as above
ux.—uxor, wife
v.—versus, against; vide, see; voce,
voice, word
v. ——a., vixit ——annos—lived [so
many] years
verb. sap.—verbum [satis] sapienti, a
word to the wise suffices
v.g.—verbi gratia, for example
viz—videlicet, namely
v.s.—vide supra, see above

## Information technology acronyms and initialisms

**9.64.** Use these forms, if abbreviations are required:

3DES—Triple DES encryption 3DM—Data Driven Decision Making ABLS—Automated Bid List System ACES—access certificates for electronic services ACID—Atomicity, Consistency, Isolation and Durability ACL—Access Control List ACP—Access Content Package AES—advanced Encryption Standard AI—Artificial Intelligence AIDC-Automatic identification and capture AIFF—audio interchange file format AIO—Asynchronous I/O AIP—Archival Information Package AJAX—Asynchronous JavaScript and ALPN—Application-Layer Protocol Negotiation API—Application Programming Interface ARK-archival resource key ARP—address resolution protocol ASCII—American Standard Code for

Information Interchange

ASP—application service provider ATO—Authority to Operate AWS—Amazon Web Services BASE—Basically Available, Soft-State, **Eventually Consistent** BDA—Big Data Analytics BI—Business Intelligence BLOB —Binary Large OBject BPEL—business process execution language BPI—business process information C&I—Cataloging and Indexing CA—certificate authority CAP—Consistency, Availability, Partition tolerance CBC—Cipher Block Chaining CD—compact disc CDM—Copy Data Management CDN—content delivery network CDR—critical design review CD-ROM—compact disc read only memory CE—content evaluator CentOS—Community Enterprise Operating System

CERN—(European) Centre for DIP—Dissemination Information Nuclear Research Package CGP—Catalog of U.S. Government DMD—Data Management Definition **Publications** DMI—desktop management interface CI-Clustered Index DML—Data Manipulation Language CIM-Common Interface Model DMV—Dynamic Management Views CISCAT—Center for Internet Security DN—Distinguished Name -Configuration Assessment Tool DNS—domain name system CISSP—Certified Information DO—digital objects Systems Security Professional DOI—Digital Object Identifier CK—Candidate Key DoS—denial of service CLOB—Character Large Object DPI—dots per inch CMS—content management system DR—Disaster Recovery CN—Canonical Name DSL—digital subscriber line CO-content originator DSR—deployment system review COG-Continuity of Government DSSL—document style and semantics COOP—continuity of operations plan language CP—content processor DVD—digital versatile disc CPS—Certificate Practice Statement DW-Database Warehouse CRC-cyclic redundancy checks E Port—Expansion port, also known CRL—Certificate Revocation List as ISL CRM—Customer Relationship EAC—estimate at completion EAD—encoded archival description Management CRUD-Create, Read, Update, and EA—enterprise architecture Delete EAP—enterprise application platform CSS—Cascading Style Sheets EBCDIC—Extended Binary Coded CSV—comma separated variable Decimal Interchange Code CTE—Common Table Expression ECC-Elliptic Curve Cryptography **CVS—Concurrent Versioning Services** ECDHE—Elliptic Curve Diffie-DaaS—Database as a Service Hellman Key Exchange DBA—Database Administrator EPS—Encapsulated PostScript DB—Database ERD—Entity Relationship Diagram ESXi-Elastic Sky X Integrated DBMS—database management ETL-Extract, Transform, Load system DCL—Data Control Language EV-Extended Validation DDL—Data Definition Language FBCA—Federal Bridge Certificate DDoS—Distributed Denial of Service Authority FC-AL-Fibre Channel Arbitrated DES—data encryption standard DHCP—Dynamic Host Control Loop Protocol FCIA—Fibre Channel Industry DH—Diffie-Hellman (Exchange) Association FC-IP-Fibre Channel Over IP DHE—Diffie-Hellman Ephemeral FCP-Fibre Channel Protocol DHSL—Distributed Hadoop Storage FC-SW-Fibre Channel Switched Layer

FDDI—fiber distributed data interface	ICMP—internet control message
FDsys—Federal Digital System	protocol
FICC—Federal Identity Credentialing	IDD—interface design description
Committee	IDE—Integrated Development
FIFO—first in first out	Environment
FIPNet—Federal Information	IDE—Integrated Drive Electronics
Preservation Network	IEEE—Institute of Electrical and
FIPS—Federal Information Processing	Electronics Engineers
Standard	IETF—Internet Engineering Task
FISMA—Federal Information Security	Force
Management Act of 2002	iFCP—Internet Fibre Channel
FK—Foreign Key	Protocol
FOSI—format output specifi cation	ILS—Integrated Library System
instance	IOPS—I/O operations per second
FTP—file transfer protocol	IOS—Apple Operating System
GBIC—Gigabit Interface Converter	IOT—Index Organized Table
Gbps—Gigabits per second	IoT—Internet of Things
GDI—graphical device interface	IP—internet protocol
GGP—gateway-to-gateway protocol	IPR—internal progress review
GIF—graphics interchange format	IPSEC—internet protocol security
GILS—Government Information	IPS—Intrusion Prevention System
Locator Service	ISAM—Indexed Sequential Access
GUI—graphical user interface	Method
HBA—Host Bus Adapter	ISL—Inter switch link
HDFS—Hadoop Distributed File	ISP—internet service provider
System	IT—information technology
HDTV—high definition television	ITU—International
HMAC—key hashed message	Telecommunications Union
authentication code	JBOD—Just a bunch of disks
HPC—High-Performance Computing	JDBC—Java Database Connectivity
HSM—hardware security module	JDF—Job Definition Format
HSM—Hierarchical Storage	JITS—Just-in-time storage
Management	JPEG—Joint Photographic Experts
HSTS—HTTP Strict Transport	Group
Security	JS—JavaScript
HTML—hypertext markup language	JSON—JavaScript Object Notation
HTTP—hypertext transfer protocol	L_Port—Loop port
HTTPS—HyperText Transfer Protocol	LAMP—Linux, Apache, MySQL and
Secure	РНР
Hz—Hertz	LAN—local area network
Iaas—Infrastructure as a Service	LDAP—lightweight directory access
IAM—Identity and Access	protocol
Management	LHC—Large Hadron Collider
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LOB—Large Object OCR—optical character recognition LPAR-Logical Partition OCSP—Online Certificate Status Protocol LPI—lines per inch ODBC—Open Database Connectivity LRU—Last Recently Used (algorithm) OLAP—Online Analytical Processing LUN-Logical Unit Number OLTP—online transaction processing MAC—message authentication code OODBMS—Object-Oriented Database MAN-Metropolitan area network Management System MARC—Machine Readable ORM—Object-Relational Mapping Cataloging PAAS—Platform as a service MDC—Multidimensional Clustering PDF—Portable Document Format Table PGP-Pretty Good Privacy METS—Metadata Encoding and PHP—PHP Hypertext Preprocessor Transmission Standard PKI—Public Key Cryptography MIME—multipurpose internet mail PK—Primary Key extensions PL/pgSQL—Procedural Language/ MIPS—millions of instructions per SQL second PL/SQL—Procedural Language/SQL MODS—Metadata Object Descriptive PNG—portable network graphics Schema PREMIS—Preservation Metadata: MOOC—massive online open courses Implementation Strategies MP3-MPEG-2 Audio Layer III PRONOM—Practical Online MPCF—marginally punched Compendium of File Formats continuous forms PTR—program tracking report MVC-Model View Controller PURL—persistent uniform resource MV-Materialized View locator NAS—Network Attached Storage QoS—Quality of service NAT—network address translation QPS—Queries Per Second NDIIPP—National Digital RAC—Real Application Clusters Information Infrastructure and (Oracle) Preservation Program RAID—redundant array of NDLP—National Digital Library inexpensive disks Program RAM—random access memory NF—Normal Form RC4—Rivest Cipher 4 NNTP—network news transfer protocol RDA—Resource Description and NOSQL-Not Only Structured Query Access Language REGEX—Regular Expression OAI—Open Archives Initiative REST—Representational State OAI-PMH—Open Archives Initiative Transfer Protocol for Metadata Harvesting RFC—Request for Comments or OAIS—open archival information Request for Change system RHEL—Red Hat Enterprise Linux OCLC—Online Computer Library RI—representation information Center

RMA—reliability, maintainability, SSD—Solid State Drive availability SSD—System Security Diagram SSH—Secure Shell RPC—remote procedure call RPM-RPM Package Manager SSL —Secure Sockets Layer RSA-Rivest, Shamir, and Adelman SSP—system security plan (public key cryptosystem) SSR—software specification review RTF-rich text format SUSE—Software und System Entwicklung (Software and RVTM—requirements verification Systems Development) traceability matrix S4—Simple Scalable Streaming System SVN—Subversion SAAS—Software as a Service TDES—Triple Data Encryption Standard SAML—security assertion markup TFS—Team Foundation Server language TIFF-tagged image file format SAN—Storage-area network SASL —Simple Authentication and TLS—transport layer security TPS—Transactions Per Second, a Security Layer measurement of database SASS—Syntactically Awesome performance Stylesheets SDD—System Design Diagram UAT—User Acceptance Testing SDD—System Design Document UDF—User Defined Function SDK—Software Development Kit UDP—user datagram protocol UDT—User Defined Type SDLC—software/system development UID—Unique Identifier lifecycle URL—uniform resource locator SDR—system design review Section 508—Section 508 of the URN—uniform resource name/ number Rehabilitation Act SFTP—Secure File Transfer Protocol UUID—Universal Unique Identifer VC-Virtual Center SGML—standard generalized markup VDC-Virtual Data Center language VIP-Virtual Internet Protocol SHA—Secure Hash Algorithm SIP—Submission Information Package VI-Virtual Interface VLAN—virtual local area network SMTP—simple mail transfer protocol VM-Virtual Machine SNMP—simple network management VMW-Vmware protocol VPN—virtual private network SOAP—Simple Object Access Protocol SOA—Service Oriented Architecture VSAN-Virtual Storage Area Network W3C-World Wide Web Consortium SQL—Structured Query Language WAI-ARIA—Worldwide Accessibility SQL PL—SQL Procedure Language Initiative - Accessible Rich used for writing stored procedures. Also see PL/SQL **Internet Applications** SQL/XML—an extension of the SQL WAIS—wide area information service WAN-Wide Area Network language used for querying XML

WAP—wireless application protocol

WAV-waveform audio format

WCAG—Web Content Accessibility Guidelines

Wi-Fi-wireless fidelity

WIP—work in process

WML—wireless markup language

www-world wide web

WYSIWYG-what you see is what you get

XAML—Extensible Application Markup Language

XDW-Extended Data Warehouse

XMLDsig-xml signature

XMLENC-xml encryption

XML—Extensible Markup Language

XPATH—XML Path Language

XQUERY—XML Query

XSD—XML Schema Definition

XSL—Extensible Stylesheet Language

XSL-FO—XSL Formatting Objects

XSLT—Extensible Stylesheet Language Transformations

YAML—Yet Another Markup

Language

YARN -Yet Another Resource Negotiator